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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/594,646 | 09/27/2006 | Hai Zhang | CU-5139 RJS | 1623 |

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| EXAMINER | |
|---|---|
| NGO, CHUONG A | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 4133 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/594,646 | ZHANG, HAI | |
| | Examiner | Art Unit | |
| | CHUONG A. NGO | 4133 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *27 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 September 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/26/07,11/15/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. This Office Action is in response to the Applicants' communication filed on 9/27/2006. In virtue of this communication, claims 1-22 are currently presented in the instant application.

### Drawings

2. The drawings submitted on 9/27/2006. These drawings are reviewed and accepted by the examiner.

### Priority

3. Receipt is acknowledged of paper submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### Information Disclosure Statement

4. The information Disclosure Statement (IDS) Form PTO-1449, filed on 2/26/2007, 11/15/2007 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosed therein was considered by the examiner.

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 7, 10-12, 14-19, 21, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Public 20040073928A1 (hereinafter Alakoski) in view of US Patent Application Public 20040266440A1 (hereinafter Fuchs).

Regarding claim 1, the limitation of "sending a message which carries MBMS bearer capabilities of a user equipment (UE) from the UE to a SGSN which the UE belongs to after passing authorization" is met by Alakoski teaches in (paragraph [0041] A request message may be received from a mobile device 50 (e.g., user equipment (UE), mobile station (MS), mobile phone, etc.) at a serving GPRS support node (SGSN) 54 through a Radio Access Node (RAN) 52 to register the mobile device to a specific multicast service, signaling 101. The request message may be in the form of an activate MBMS context request);

the limitation of "verifying whether the MBMS bearer capabilities of the UE are less than Required MBMS Bearer Capabilities, if the SGSN has the Required MBMS Bearer Capabilities" is met by Alakoski teaches in (paragraph [0041] It may be verified that the mobile device is authorized to receive generic MBMS bearer data or service, 103. The verifying may be based on subscription data retrieved from a Home Location Register (HLR) (not shown) by the SGSN 54);

Although Alakoski does not explicitly teach "rejecting a request for activating an MBMS Context if the MBMS bearer capabilities of the UE are less than the Required MBMS Bearer Capabilities, or creating an MBMS UE Context if the MBMS bearer capabilities of the UE are not less than the Required MBMS Bearer Capabilities". However, attention is directed to Fuchs, which teaches

(paragraph [0083] MGSN 56 forwards to an associated GGSN 58 context requests it does not handle. Alternatively or additionally, MGSN 56 rejects context requests it does not handle. MSs 20 optionally resends the context request to a GGSN 58 responsive to the rejection from MGSN 56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was make to modify the Alakoski invention by employing the teaching as taught by Fuchs to include emulating a virtual subscriber mobile station (MS) that subscribes to a multicast service and receives the multicast data for the cell. Doing so would merely involve using known technique (packet based networks comprise a plurality of routers interconnected through communication links) to improve similar device (mobile stations) in the same way (multicast service).

Regarding claim 2, the limitation of "creating a Packet Data Protocol (PDP) Context through interaction with a network and sending a joining message to the network via the SGSN which the UE belongs to" is met by Alakoski teaches in (paragraph [0034] The procedure regarding the MBMS authorization may be similar to the PCF-GGSN signaling flows in the Release 5 specifications. For example, the GGSN requests authorization information from PCF for the MBMS media flows carried by a PDP context);

the limitation of "receiving the joining message, implementing an authorization verification to the UE, and permitting the UE to activate an MBMS UE Context and send the message which carries the MBMS bearer capabilities

of the UE to the SGSN which the UE belongs to if the UE passes authorization" is met by Alakoski teaches in (paragraph [0030] According to embodiments of the present invention, the enhanced PCF can provide QoS authorization and access control for an MBMS session. The enhanced PCF can perform this authorization based on the information provided by the BM-SC and operator policy stored in the enhanced PCF. According to embodiments of the present invention, the BM-SC may be connected to the enhanced PCF rather than to the GGSN).

Regarding claim 7 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed claim 3 above.

Regarding claim 10 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed claim 4 above.

Regarding claim 11 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed claim 3 above.

Regarding claim 12 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed claim 1 above.

Regarding claim 14 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed claim 2 above.

Regarding claim 15 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed claim 12 above.

Regarding claim 16 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed claim 2 above.

Regarding claim 17 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed claim 10 above.

Regarding claim 18 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed claim 4 above.

Regarding claim 19 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed claim 6 above.

Regarding claim 21 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed claim 6 above.

Regarding claim 22 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed claim 12 above.

7. Claims 3-6, 8, 9, 13, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Public 20040073928A1 (hereinafter Alakoski) in view of US Patent Application Public 20040266440A1 (hereinafter Fuchs) and further in view of Patent Application Public 20020054596A1 (hereinafter Sengodan).

Regarding claim 3, Alakoski and Fuchs do not teach “sending a rejection message which carries a rejection reason”. However, attention is directed to Sengodan, which teaches ([0053] Another aspect of the present invention is that a discoverer is provided at the receiving end, the discoverer, upon receiving a request message, decrementing the Hop Count, modifying the hop-by-hop parameters, examining whether the Hop Count is zero, passing the request message down the multicast tree when the Hop Count is zero, examining the destination parameters, and suitably sending a confirm or rejection message to

the discoverer). Also Alakoski and Fuchs do not teach "receiving the failure message which carries a failure reason". However, attention is directed to Sengodan, which teaches ([0069] FIG. 2 illustrates a Discoverer 210 and a Discoverer 220 from an OSI layer standpoint 200. As shown, the protocol according to the present invention is used at the application layer 230 rather than at the lower layers 240. A Discoverer 210 is the entity that wishes to discover a certain resource, while the Discoverer 220 is the resource that is being discovered. A Request 250 is the message that is sent by the Discoverer 210 to the well-known multicast group. A Confirm 252 is the message that a Discoverer 220 unicasts to the Discoverer 210 upon receiving a Request message 250 indicating that the Discoverer 210 could use this resource. Finally, Reject 254 is the message that a Discoverer 220 unicasts to the Discoverer 210 upon receiving a Request message 250 indicating that the Discoverer 210 can not use this resource. See paragraph 79 and 82 for additional information).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was make to modify the Alakoski invention by employing the teaching as taught by Fuchs to provide for setting a window for receiving the confirm message, wherein the discovery unit sets the timer after the first request message is sent, detects whether a confirm message is received before the timer expires and terminates the location of an endpoint when a confirm message is received prior to the expiration of the timer. Doing so would merely involve using known technique (the application sending a notification to the discovery

unit for locating an endpoint application) to improve similar device (mobile stations and mobile phones) in the same way (sets the timer after the first request message is sent, detects whether a confirm message is received before the timer expires).

Regarding claim 4 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed claim 3 above.

Regarding 5, the limitation of "sending a failure message which carries a failure reason to a GGSN" is met by Alakoski teaches in (paragraph [0042] The GGSN 56 may confirm authorization for the mobile device 50 and send a join response to the SGSN 54, signaling 107. The GGSN 56 may join an IP multicast for the IP multicast address to connect with a MBMS data source).

the limitation of "receiving the failure message and deciding whether to return back to an IP multicast access of a unicast mode" is met by Alakoski teaches in (paragraph [0043] The MBMS service management function may return the service attributes (e.g., service area and, for each stream, target QoS and packet filter), signaling 206. The PCF function may pass a message indicating the decision and containing the service attributes to the GGSN, signaling 207. All necessary MBMS contexts may then be created by the SGSN and GGSN, signaling 208).

Regarding claim 6 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed claim 4 above.

Regarding claim 8, 13, 20 “reject and verify messages” as modified by Alakoski and Fuchs for claim 1 discloses all the subject matter of the claimed invention except “receiving the rejection message and activating a timer”. However, attention is directed to Sengodan, which teaches ([0047] Another aspect of the present invention is that a timer is provided for setting a window for receiving the confirm message, wherein the discovery unit sets the timer after the first request message is sent, detects whether a confirm message is received before the timer expires and terminates the location of an endpoint when a confirm message is received prior to the expiration of the timer and Paragraph [0053] Another aspect of the present invention is that a discoverer is provided at the receiving end, the discoverer, upon receiving a request message, decrementing the Hop Count, modifying the hop-by-hop parameters, examining whether the Hop Count is zero, passing the request message down the multicast tree when the Hop Count is zero, examining the destination parameters, and suitably sending a confirm or rejection message to the discoverer).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was make to modify the Alakoski invention by employing the teaching as taught by Fuchs to provide for setting a window for receiving the confirm message, wherein the discovery unit sets the timer after the first request message is sent, detects whether a confirm message is received before the timer expires and terminates the location of an endpoint when a confirm message is received prior to the expiration of the timer. Doing so would merely involve

using known technique (the application sending a notification to the discovery unit for locating an endpoint application) to improve similar device (mobile stations and mobile phones) in the same way (sets the timer after the first request message is sent, detects whether a confirm message is received before the timer expires).

Regarding claim 9 has limitations similar to those treated in the above rejection(s), and are met by the references as discussed claim 8 above.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG A. NGO whose telephone number is 571-270-7264. The examiner can normally be reached on Monday 7:00AM to 5:30PM, Tuesday through Thursday 6:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Abul Azad can be reached on 571-272-7599. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ABUL AZAD/
Supervisory Patent Examiner, Art Unit 4133

/CHUONG A NGO/
Examiner, Art Unit 4133